CLAIMS

1. Data transmission process, characterised in that:

a) at transmission:

- the data to be transmitted is divided into N data blocks (B_1, B_2, ..., B_N),

- these N blocks are processed in parallel in N M-ary orthogonal keying (MOK) modulation channels, each modulation using a group of spread codes, each channel emitting a signal (S_1, S_2, ..., S_N),

- all these signals (S) are transmitted in series.

b) at reception:

- the signal received (R) is processed in N M-ary orthogonal keying (MOK) demodulation channels, giving N data blocks (B_1, B_2, ..., B_N),

- said N data blocks are grouped together in series to reproduce the transmitted data.

2. Process according to claim 1, wherein the modulation and demodulation consist of M-ary bi-orthogonal keying (MBOK) modulation and demodulation.

3. Process according to claim 1, wherein the modulation and demodulation consist of M-ary orthogonal keying (MOK) modulation and demodulation combined with phase shift keying (PSK) modulation and demodulation.

4. Process according to claim 3, wherein the phase shift keying modulation and demodulation consist of

differential phase shift keying (DPSK) modulation and demodulation.

5. Process according to claim 1, ~~any of claims 1 to 4,~~ wherein the number of spread codes is the same in each group.

6. Process according to claim 1, ~~any of claims 1 to 5,~~ wherein the spread codes used are all different from one group to another and the code numbers are equal to powers of 2.

7. Process according to claim 1, ~~any of claims 1 to 5,~~ wherein certain spread codes are used in several groups.

8. Transmitter for the implementation of the transmission phase of the process according to claim 1, characterised in that it comprises:

- means to divide the data to be transmitted into N data blocks $(B_1, B_2, \ldots, B_N)$,
- means to process these N blocks in parallel in N M-ary orthogonal keying (MOK) modulation channels, each modulation using a group of spread codes, each channel emitting a signal $(S_1, S_2, \ldots, S_N)$,
- means to transmit these N signals in series.

9. Transmitter according to claim 8, wherein the modulation is an M-ary bi-orthogonal keying (MBOK) modulation.

10. Transmitter according to claim 8, wherein the modulation is an M-ary orthogonal keying (MOK) modulation combined with a phase shift keying (PSK) modulation.

11. Transmitter according to claim 10, wherein the phase shift keying modulation is a differential phase shift keying (DPSK) modulation.

12. Receiver for the implementation of the reception phase of the process according to claim 1, characterised in that it comprises:

- means to process the signal received (R) in parallel in N M-ary orthogonal keying (MOK) demodulation channels, giving N data blocks (B_1, B_2, ..., B_N),
- means to group these N data blocks together in series and reproduce the transmitted data.

13. Receiver according to claim 12, wherein the demodulation is an M-ary bi-orthogonal keying (MBOK) demodulation.

14. Receiver according to claim 12, wherein the demodulation is an M-ary orthogonal keying (MOK) demodulation combined with a phase shift keying (PSK) demodulation.

15. Receiver according to claim 14, wherein the phase shift keying demodulation is a differential phase shift keying (DPSK) demodulation.

add A' add B'